ABSTRACT OF THE DISCLOSURE

The present invention is directed to a system and method for multiplication of matrices in a vector processing system. Partial products are obtained by dot multiplication of vector registers containing multiple copies of elements of a first matrix and vector registers containing values from rows of a second matrix. The dot products obtained from this dot multiplication are subsequently added to vector registers which make up a product matrix. In an embodiment of the present invention, each matrix may be divided into submatrices to facilitate the rapid and efficient multiplication of large matrices, which is done in parts by computing partial products of each submatrix. The matrix multiplication performed by the present invention avoids rounding errors as it is bit-by-bit compatible with conventional matrix multiplication methods.